Breaking the cycle?

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Offspring of depressed and anxious patients: help-seeking after first onset of a mood and/or anxiety disorder

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ABSTRACT

Background

Offspring of patients with depressive and/or anxiety disorders are at high risk of developing a similar disorder themselves. Early recognition and treatment may have substantial effects on prognosis. The main aim of this study was to examine the time to initial help-seeking and its determinants in offspring after the first onset of a mood and/or anxiety disorder.

Methods

Data are presented of 215 offspring with a mood and/or anxiety disorder participating in a cohort study with 10 year follow-up. We determined age of disorder onset and age of initial help-seeking. Offspring characteristics (gender, IQ, age of onset, disorder type, suicidal ideation) and family characteristics (socioeconomic status, family functioning) were investigated as potential predictors of the time to initial help-seeking.

Results

The estimated overall proportion of offspring of depressed/anxious patients who eventually seek help after onset of a mood and/or anxiety disorder was 91.9%. The time to initial help-seeking was more than two years in 39.6% of the offspring. Being female, having a mood disorder or comorbid mood and anxiety disorder (relative to anxiety) and a disorder onset in adolescence or adulthood (relative to childhood) predicted a shorter time to initial help-seeking.

Limitations

Baseline information relied on retrospective reports. Age of onsets and age of initial help-seeking may therefore be subject to recall bias.

Conclusion

Although most offspring eventually seek help after onset of a mood/anxiety disorder, delays in help-seeking were common, especially in specific subgroups of patients. This information may help to develop targeted strategies to reduce help-seeking delays.

INTRODUCTION

Depressive and anxiety disorders are disabling conditions that require timely and adequate treatment.[1] Untreated disorders may have severe consequences, including significant psychosocial difficulties and an unfavorable clinical course.[2-4] In addition, the longer symptoms have lasted, the poorer the response to treatment.[5-7] Less than one third of adults who screened positive for depression received treatment in the past year.[8] Studies concentrating on persons with a current disorder as established with a psychiatric diagnostic interview also found that the majority of depressed/anxious persons did not receive treatment: only one third of persons with a mood disorder and one fifth of persons with an anxiety disorder reported mental healthcare use in the past year.[9,10] Other studies used a different approach by not focusing exclusively on recent mental health care use, but investigating retrospectively the time to help-seeking after first onset of a psychiatric disorder in patients with lifetime psychopathology.[e.g.11,12] These studies indicate that the majority suffering from depressive and anxiety disorders eventually seek help, but substantial delays exist between disorder onset and initial help-seeking. Wang and colleagues[11] for example, reported help-seeking probabilities for any mood disorder of more than 90% in most investigated countries in Europe and in the USA, but with median duration of delays varying from 1 to 4 years after onset. This is relevant because, especially if recognized early, these disorders can be effectively treated.[13-15] Delayed or no help-seeking may therefore cause much unnecessary suffering and represents an important public health problem.

To inform strategies to promote timely help-seeking, knowledge on factors facilitating or delaying the time to initial help-seeking are of great importance. Therefore, prior studies (all but one performed in adult samples[16]) have examined factors likely to influence initial help-seeking.[11,12,16-21] Having a younger age of onset was consistently found to be associated with help-seeking delays.[11,12,16-21] Previous investigators suggested that children's dependency on adults to seek professional help and having become habituated to symptoms as they already appeared at young ages may act as barriers to help seeking.[12,18] In addition, studies found persons with mood disorders to have a shorter time to help-seeking as compared to those with anxiety disorders[11,16,17,20,21] which may be explained by the higher levels of impairments generally associated with mood disorders.[22,23] Furthermore, some studies found being female[11,21] and disorder severity[16] to be positively related to initial help-seeking. Socioeconomic indicators[16,18,20] and intelligence[16] were not found to be relevant in predicting initial help-seeking.

A group highly in need of treatment are the offspring of depressed and anxious patients. A recent study by our own group[24] found that an estimated two third of these offspring develops a mood or anxiety disorder before the age of 35, illustrating their high need for care. Furthermore, research suggests that these offspring may be at increased risk for a poor prognosis.[25,26] Initial help-seeking has not previously been studied among these vulnerable offspring, and the factors involved are currently unknown. The present study, therefore, reports on initial help-seeking after the first onset of a mood and/or anxiety disorder in

offspring of depressed and anxious patients. Our main aim was to examine the time to initial help-seeking and its associations with offspring (i.e., gender, IQ, age of disorder onset, type of disorder, suicidal ideation) and family characteristics (i.e., socioeconomic status, family functioning). Other than previous studies, this study explored the role of family functioning as this factor have shown to be of relevance in some studies on help-seeking for mental health problems.[27] A secondary aim was to document whether these offspring received secondary care (i.e., specialized treatment), again in relation to offspring- and family characteristics. Based on previous research[16], we expect factors relevant in predicting secondary care to be largely similar to those of initial-help seeking. A lower socioeconomic status may be associated with receiving secondary care in particular.[16]

METHOD

Design and recruitment

Data were from the ARIADNE cohort (Adolescents at Risk of Anxiety and Depression: A Neurobiological and Epidemiological approach; starting in 2000). This prospective cohort study included 523 offspring (baseline age 13-25 years) of 366 patients who had received specialized treatment for depressive (ie., major depressive disorder, dysthymia) and/or anxiety disorder (ie., panic disorder with or without agoraphobia, obsessive-compulsive disorder) at psychiatric facilities in the north of the Netherlands. Patients and their offspring were excluded from study participation if the parent had a history of schizophrenia or posttraumatic stress disorder (see Havinga et al 2017 for a detailed description of the study design). Of these parents, 320 had a depressive disorder (87.4%; of which 43.1% had a pure depressive disorder and 56.9% had a comorbid anxiety disorder) and 207 had an anxiety disorder (56.6%; of which 12.1% had a pure anxiety disorder and 87.9% had a comorbid depressive disorder) as established with the Composite International Diagnostic Interview (CIDI).[28] No formal CIDI diagnosis was present in 5.5% of the index parents. Mean age of the offspring included in the study was 18.1 years (SD=3.2) and 57% were female. The families these offspring were raised varied in educational attainment (low: 28%; medium: 34%; high: 38%), occupational level (skilled: 54%), and income level (above average: 50%). All offspring were of native Dutch origin.

Face-to-face assessments, including the CIDI to assess de lifetime presence of mood and anxiety disorders, were conducted at baseline with the recruited patients and their offspring. Offspring completed self-report questionnaires at baseline, 1-year, 2-year and 4-years follow-up. These questionnaires assessed a wide range of DSM-IV symptoms, temperament, social support, coping, family functioning and parent-adolescent communication. After official closure of the ARIADNE study, offspring were again approached and asked if they were willing to participate in the Netherlands Study of Depression and Anxiety (NESDA).[29] This procedure was based on medical ethical regulations and resulted in a large drop-out (i.e., 50.1%) between the two studies. NESDA is an ongoing cohort study with face-to-face assessments, including the same diagnostic interview (i.e., CIDI), conducted at baseline and

then with two-year intervals. For the present study, the ARIADNE assessments and NESDA assessments were combined, covering a period of 10 years of prospective data. Of the 523 offspring of the original cohort, 261 (49.9%) participated in the 4-year assessment, 241 (46.1%) in the 6-year assessment, 232 (44.4%) in the 8-year assessment and 229 (43.8%) in the 10-year assessment. The ARIADNE and NESDA study protocols were approved by the Medical Ethics Committee of the University Medical Center Groningen and, for both studies, participants provided written informed consent.

Sample selection

For the present study, we selected 215 offspring (baseline age 13-25 years; mean=18.9, SD=3.4) with a mood and/or anxiety disorder at either the baseline assessment (retrospective reports; n=145) or at one of the follow-up assessments (n=70). Figure 1 shows the study design of the present study. To assess offspring DSM-IV diagnoses of mood (major depressive disorder, dysthymia, bipolar disorder) and anxiety disorder (generalized anxiety disorder, social phobia, panic disorder, agoraphobia) the CIDI was used at baseline and at 4-year, 6-year, 8-year and 10-year follow-up. The CIDI is a comprehensive, fully-structured interview for assessing psychiatric disorders according to DSM-IV criteria and was administered by extensively trained and monitored interviewers. The CIDI has shown to be a reliable and valid instrument for assessing mood and anxiety disorders[30] and is widely used in epidemiological studies.[e.g.31,32]

Main outcome: initial help-seeking

Help-seeking was assessed at baseline, 2-year, 4-year, 6-year, 8-year and 10-year follow-up and defined as ever having talked to or received help from a medical doctor or other professional (e.g., psychologist, social worker, counselor, healing professionals) for mental health problems. This measure thus also included treatment in secondary care. Age of initial help-seeking was derived retrospectively at the baseline assessment and prospectively at all follow-up assessments. At baseline respondents who reported help-seeking were subsequently asked how old they were the first time they did so. As questions on specific ages of first help-seeking were not included in follow-up assessments, it was first determined at which assessment (i.e., 2-year, 4-year, 6-year, 8-year or 10-year) help-seeking was first reported. Then, for cases reporting initial-help seeking during follow-up the average age between the first assessment at which the respondent reported help-seeking and the age at the previous assessment was included. *Time to initial help-seeking* was defined as the difference in age at first help-seeking and age at disorder onset.

Secondary outcome: treatment in secondary care

Secondary mental health care (i.e., specialized care) manages the more serious and complex psychiatric disorders and provides intensive forms of treatment. Secondary care requires referral of the general practitioner who acts as a gatekeeper to specialized care. In the

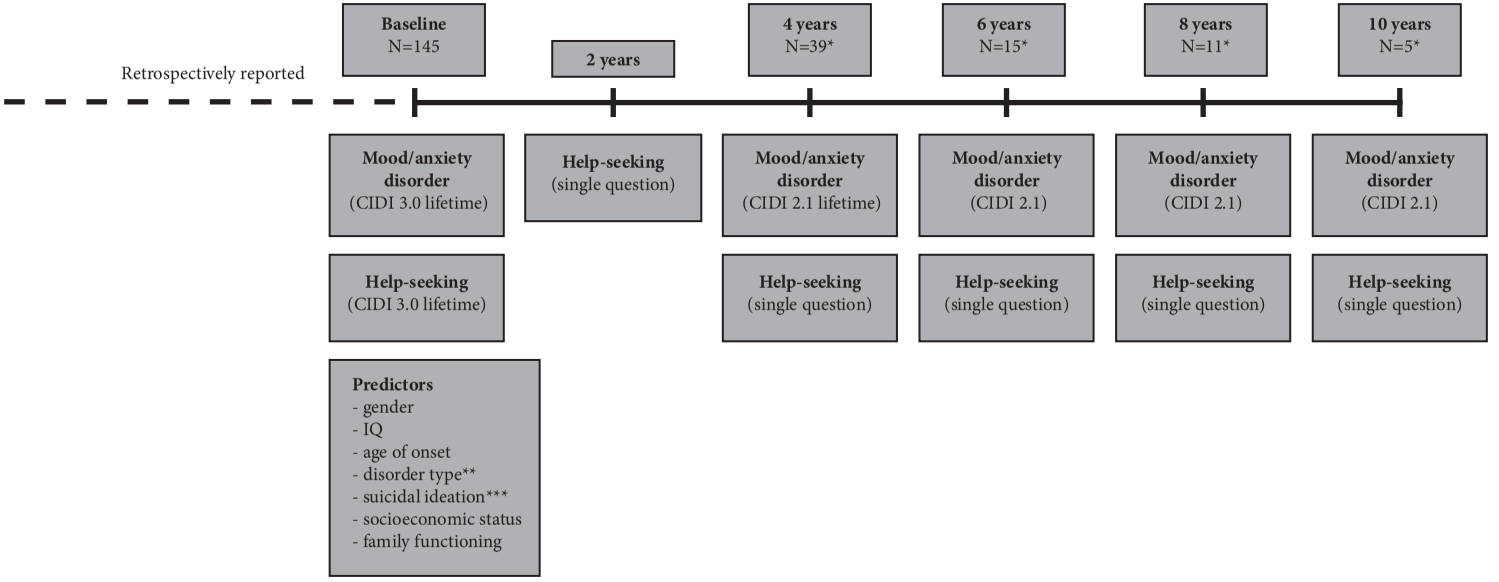

Figure 1. Overview of the study design

* Number of offspring with a mood/anxiety disorder included since previous waves.
** Disorder type was determined at the assessment the disorder was first diagnosed which could be at baseline, 4-year, 6-year, 8-year or 10-year follow-up.
*** Suicidal ideation was also assessed at baseline, 1-year, 2-year, 4-year, 5-year, 6-year, 8-year and 10-year follow-up.

Netherlands, no major financial constraints hamper seeking professional help as all Dutch inhabitants are, in principle, covered by private or public health insurance.[33] To examine whether offspring received secondary care, data from the ARIADNE cohort were linked to the Psychiatric Case Registry North Netherlands (PCRNN). PCRNN registers specialist treatment in child, adolescent and adult mental health and substance abuse services in the North of the Netherlands since 2000. The registry excludes primary (youth and adult) mental health care and for-profit providers of mental health care (i.e., private practices and commercial mental health care services). The PCRNN records every time a patient receives care (i.e., care contacts), which is defined as an outpatient contact, part-time treatment day or clinical care day (24 h), and can be used to determine whether and when offspring had entered secondary care.

Information on secondary care entrance was not available before the year 2000. Of the 215 offspring, we therefore selected a subsample of offspring with an incident mood and/or anxiety disorder after 2000 (n=70; mean age=17.7, SD=3.4). As a consequence, this sample did not include offspring who had their first disorder onset in childhood. *Time to treatment in secondary care* was defined as the difference in age at first secondary care entrance and age at disorder onset.

Potential predictors

Offspring characteristics.

Gender was included as a predictor.

Intelligence was assessed at baseline using the Vocabulary and Block Design subtests of the Wechsler Adult Intelligence Scale (WAIS).[34] A full scale IQ was estimated using the formula described by Sattler.[35] As the average IQ score has been shown to increase about 3 points per decade[36] (i.e., the Flynn effect), full scale IQ scores were corrected by subtracting 9 points (test was standardized in the Netherlands in 1970 and performed by our participants in 2000).

Retrospective *age of onset* reports were obtained for all mood and anxiety diagnoses across all waves by means of age of onset questions included in the CIDI. At baseline, a special sequence of questions was used which was designed to improve the reliability of retrospectively reported age of onset estimates (see[37,38] for more details on specific questions). Offspring were categorized as having their first disorder onset in childhood (4-12 years) in adolescence (13-18 years) or in adulthood (≥19 years).

Disorder type was defined as a mood disorder, an anxiety disorder or a comorbid mood and anxiety disorder. In offspring who had developed a comorbid mood and anxiety disorder, disorder type was defined as a 'mood disorder' if the mood disorder first occurred, an 'anxiety disorder' if the anxiety disorder first occurred and a 'comorbid mood and anxiety disorder' when both disorders had their onset within two years.

Suicidal ideation was included as severity indicator and assessed with the CIDI suicide module at baseline, 4-year, 6-year, 8-year and 10-year follow-up. The CIDI measures suicidal thoughts according to DSM-IV criteria. In addition, suicidal ideation was assessed using a

single item 'I think about suicide' at baseline, 1-year, 2-year, 4-year, 5-year, 6-year, 8-year and 10-year follow-up. Response scale was 1 'no', 2 'to a small extent' 3 'to a large extent' and 4 'to a very large extent'. The latter two answers were recoded as 'present'. For each respondent, the presence or absence of suicidal thoughts as indicated through self-report or CIDI interview in the period prior to the assessment the disorder was first diagnosed, was incorporated in the analyses.

Family characteristics

Socioeconomic status (SES) was based on baseline educational attainment, occupational level and income level for both parents (six scales). Scale scores were then converted to Z-scores and combined into one SES variable. This was done for the total ARIADNE sample (n=523).

Family functioning was assessed at baseline with the Cohesion and Adaptability scales of the Dutch Family Dimension Scales (FDS).[39] This instrument assessed the extent to which family members are adaptive (adaptability scale) and attached (cohesion scale) to their family. Adequate levels of both cohesion and adaptability were defined as 'balanced' family functioning.[39] Remaining scores were categorized as 'unbalanced'.

Statistical analyses

We used survival analyses to analyze our data as our outcome of interest was the time to help-seeking. This method takes into account the follow-up time of each person being followed and thus takes into account all available data. First, the Kaplan-Meier method was used to generate a time to initial help-seeking curve. Second, univariable Cox regression analyses were performed to examine potential predictors of *time to initial help-seeking* (further referred to as 'initial help-seeking') after the first onset of mood and/or anxiety disorder. Reference categories were childhood age of onset (4-12; relative to adolescent (13-18) and young adult (>= 19), respectively) and anxiety disorder (relative to mood, and comorbid mood and anxiety disorder, respectively). Age of onset was included as time-dependent covariate in the model, as the proportional hazard assumption was violated for this variable. Finally, a multivariable Cox regression analysis was performed selecting all predictors with $p<.20$ in the univariable analyses to determine which predictors were independently associated with initial help-seeking. Similar steps were followed for the analyses on the *time to treatment in secondary care* (further referred to as 'treatment in secondary care') conducted in a subsample of 70 offspring. SES was included as time-dependent covariate in the model, as the proportional hazard assumption was violated. In addition, as the PCRNN does not register treatment in secondary care outside the northern region, we performed a sensitivity analysis excluding those offspring who are moved elsewhere (36.2% of offspring without registered mental health care) to test if associations were similar. To account for potential nonindependence of outcomes for offspring from the same family Cox regression analyses were adjusted for familial clustering of sibling using clustered standard errors (Stata version 14.0).

RESULTS

Sample characteristics

Table 1 presents the characteristics of offspring with a mood and/or anxiety disorder for the analyses on initial help-seeking (n=215) and the subsample for the analyses on treatment in secondary care (n=70). With the exception of age of onset, characteristics were highly similar across the two samples. Anxiety disorders were proportionally more represented in the childhood-onset group (anxiety: 50,0%; mood: 33.9%; comorbid: 16.1%) as compared to the adolescent-onset (anxiety: 22.4%; mood: 51.8%; comorbid: 25.9%) and adulthood-onset group (anxiety: 25.0%; mood: 48.5%; comorbid: 26.5%).

Initial help-seeking

Figure 2 shows that the estimated overall proportion of offspring who eventually seek help was 91.9%. For 39.6% of the offspring, the time to initial help-seeking was more than two years. The probability of help-seeking was substantially higher in the first two years after onset than in subsequent years.

Table 2 shows the results of the univariable Cox regression analyses relating potential predictors to the time to initial help-seeking in offspring. Being female, having a mood disorder or comorbid mood and anxiety disorder (relative to anxiety) and a disorder onset in adolescence or adulthood (relative to childhood) predicted a shorter time to initial help-seeking. Age of disorder onset was found to have a time-dependent association with initial help-seeking, indicating that the estimated hazard declined over time. None of the family characteristics showed a significant association. Offspring gender, age of onset and type of

Table 1. Sample characteristics

	Sample for analyses on initial help-seeking (n=215)	Sample for analyses on treatment in secondary care (n=70)
Characteristic	n(%)/mean(sd)	n(%)/mean(sd)
Offspring characteristics		
Gender (female)	154 (71.6)	51 (72.9)
IQ	107.5 (12.4)	108.0 (11.9)
Age of disorder onset (years)		
4-12	62 (28.8)	-
13-18	85 (39.5)	17 (24.3)
≥19	68 (31.6)	53 (75.7)
Type of disorder		
Anxiety	67 (31.2)	17 (24.3)
Mood	98 (45.6)	34 (48.6)
Comorbid	50 (23.3)	19 (27.1)
Suicidal ideation (yes)	64 (29.8)	21 (30.0)
Family characteristics		
Socioeconomic status	0 (0.7)	0.1 (0.7)
Balanced family functioning (yes)	95 (44.2)	35 (50.0)

Note. Socioeconomic status variable is transformed to a z-score.

Table 2. Associations of offspring- and family characteristics with initial help-seeking after first onset of mood and/or anxiety disorder (n=215)

	Initial help-seeking Univariable[a]			Initial help-seeking Multivariable[b]		
Predictor	HR	95% CI	p	HR	95% CI	p
Offspring characteristics						
Gender (female)	1.38	1.01-1.88	.040	1.54	1.15-2.05	.003
IQ	1.00	0.99-1.01	.716	-	-	-
Age of disorder onset (years)						
4-12		reference			reference	
13-18	2.49	1.57-3.95	<.001	2.14	1.35-3.37	.001
≥19	3.93	2.42-6.38	<.001	3.33	2.02-5.49	<.001
13-18 * time	0.87	0.78-0.96	.007	0.86	0.78-0.95	.002
≥19 * time	0.74	0.60-0.93	.008	0.77	0.62-0.97	.025
Type of disorder						
Anxiety		reference				
Mood	2.02	1.45-2.80	<.001	1.90	1.34-2.70	<.001
Comorbid	2.83	1.97-4.06	<.001	2.56	1.77-3.70	<.001
Suicidal ideation (yes)	1.14	0.87-1.50	.333	-	-	-
Family characteristics						
Socioeconomic status	1.00	0.84-1.18	.991	-	-	-
Balanced family functioning (yes)	1.25	0.98-1.59	.072	1.10	0.87-1.38	.436

Note. HR = Hazard ratio; 95%CI = 95% confidence interval; a = Based on univariable Cox regression analyses; b = Based on multivariable Cox regression analysis, including all variables that had a p<.20 in the univariable analyses.

disorder remained significant predictors in multivariable Cox regression analysis. A final post hoc analysis in which we shifted the reference categories of the three-category variables (i.e., age of disorder onset and disorder type; tables available on request) revealed that the time to help-seeking was significantly shorter in offspring with a young adult onset as compared to offspring with a disorder onset in adolescence. Offspring with a comorbid disorder had a significantly shorter time to help-seeking as compared to those with a mood disorder.

Treatment in secondary care

Figure 3 shows that the estimated overall proportion of offspring who receive secondary care was 36.0%. Of the 23 offspring who entered treatment, 11 had a comorbid mood and anxiety disorder, 10 had a mood disorder and 2 had an anxiety disorder. All offspring had received outpatient care and, in addition, 5 (21.7%) had received part-time treatment, whereas none had received clinical care. Twelve (52.2%) offspring had more than 20 care contacts.

Table 3 shows the results of the univariable Cox regression analyses relating potential predictors to the time to treatment in secondary care. The time to treatment in secondary care was longer in offspring with a higher IQ. Offspring with a comorbid mood and anxiety disorder had a shorter time to treatment as compared to offspring with an anxiety disorder. Type of disorder, IQ and SES were significant predictors in multivariable Cox regression analysis. SES was found to have a time-dependent association with treatment in secondary care, indicating that the estimated hazard declined over time. A final post hoc analysis in

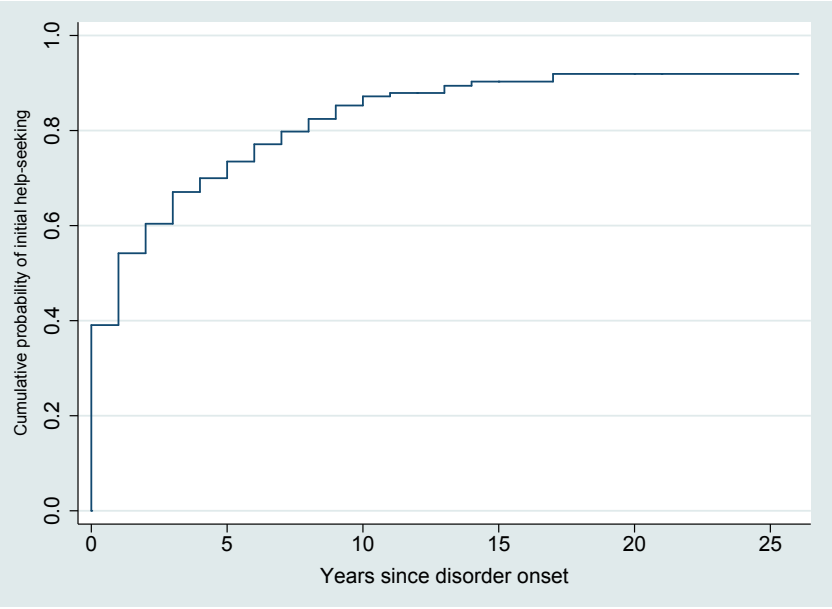

Figure 2. Cumulative probability of initial help-seeking after the first onset of mood and/or anxiety disorder in offspring (Kaplan-Meier failure estimate)

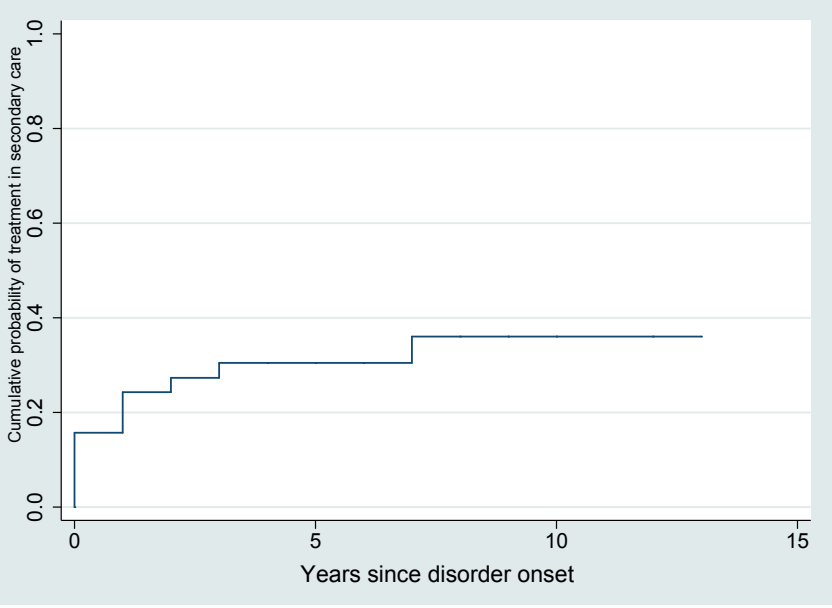

Figure 3. Cumulative probability of treatment in secondary care after the first onset of mood and/or anxiety disorder in offspring (Kaplan-Meier failure estimate)

Table 3. Associations of offspring- and family characteristics with treatment in secondary care after first onset of mood and/or anxiety disorder (n=70)

	Treatment in secondary care Univariable[a]			Treatment in secondary care Multivariable[b]		
Predictor	HR	95% CI	p	HR	95% CI	p
Offspring characteristics						
Gender (female)	1.88	0.68-5.24	.226	-	-	-
IQ	0.98	0.95-1.01	.108	.97	.93-1.00	.044
Age of disorder onset						
13-18		reference		-	-	-
≥19	0.66	0.30-1.48	.317	-	-	-
Type of disorder						
Anxiety		reference			reference	
Mood	2.69	0.61-11.90	.193	2.21	0.51-9.54	.289
Comorbid	6.74	1.58-28.78	.010	5.98	1.44-24.75	.014
Suicidal ideation (yes)	1.78	0.83-3.86	.141	1.76	0.65-4.74	.263
Family characteristics						
Socioeconomic status	0.59	0.29-1.19	.140	0.53	0.28-1.00	.049
Socioeconomic status * time	1.83	1.18-2.81	.006	1.74	1.15-2.62	.009
Balanced family functioning (yes)	1.49	0.66-3.34	.335	-	-	-

Note. HR = Hazard ratio; 95%CI = 95% confidence interval; a = Based on univariable Cox regression analyses; b = Based on multivariable Cox regression analysis, including all variables that had a p<.20 in the univariable analyses.

which reference categories of the disorder type variable were shifted revealed that the time to treatment in secondary care was significantly shorter in offspring with a mood disorder as compared to those with an anxiety disorder. Sensitivity analysis excluding offspring who had moved outside the northern region yielded similar results, that is, the same predictors reached significance in the multivariable model with hazards at least as great as those in the original multivariable analysis. In addition, suicidal ideation became a significant predictor (HR=2.90, 95%CI=1.02-8.23).

DISCUSSION

We showed that the far majority of offspring with a mood and/or anxiety disorder eventually seek help after disorder onset (91.6%), although one third of them waited more than two years before doing so. The time to initial help-seeking was shorter in females than in males. In addition, we found that the time to help-seeking was shortest in offspring with an adulthood-onset, followed by those with an adolescent-onset and a childhood-onset who reported the longest help-seeking delays. The same was true for having a comorbid mood and anxiety disorder, a mood disorder and an anxiety disorder, respectively, with the latter showing the longest time to help-seeking. An estimated one third of the offspring entered secondary care, in particular those with a lower IQ, comorbid mood and anxiety or a lower SES.

Strengths and limitations

Major strengths of our study are the longitudinal design with regular (diagnostic) assessments,

the examination of both initial help-seeking and treatment in secondary care, and the use of administrative health care data which are unaffected by recall bias. However, some limitations need to be acknowledged. First, although our study had a prospective design with regular assessments, baseline information relied on retrospective reports which is a limitation of the present study. Age of onsets and age of first initial help-seeking may be subject to recall bias, even though we attempted to reduce bias by using a sequence of questions designed to improve the reliability of age of onset estimates[37,38], and with that, age of first help-seeking estimates. It should be noted, however, that the period of recall was much shorter in our study (age at baseline: mean 18.1 years, SD = 3.2) than in most previous cross-sectional studies on initial help-seeking as they used adult samples. Second, initial help-seeking was broadly assessed and did not include specific information on the type of professional that was contacted. In addition, we had no information on whether treatment was actually obtained. Third, we did not follow all offspring the entire follow-up period. The Medical Ethical Commitee's decided that the ARIADNE study had to be officially closed before we were able to invite offspring to participate in NESDA. This was the main reason for the large drop-out rate (ie, 50.1%) in the process between the studies. Fourth, the sample size for the analyses on treatment in secondary care was small and results must therefore be interpreted with caution. Further larger studies are required to confirm current findings. Fifth, we assessed treatment in secondary care in general and, consequently, it is possible that offspring were not treated for mood/anxiety disorder but for other kinds of psychiatric disorders. Sixth, for-profit providers of mental health care (ie, private practices and commercial mental health care services) and mental health care services outside the Northern part of the Netherlands were not included in our measure of secondary care. Even though the far majority of patients are treated by large mental health care providers included in the PCRNN, the probability of receiving secondary care may be underestimated. Finally, as the PCRNN registers care contacts since 2000, offspring with a disorder onset before the year 2000 were excluded from analyses. As a consequence, this sample did not include childhood-onset cases. As the latter very likely have considerable treatment delays, the time to treatment in secondary care may be somewhat longer than presented.

Comparison with previous studies

Despite delays in initial help-seeking, it is estimated that almost all offspring (91.3%) eventually take the step to contact a professional after the first onset of a mood or anxiety disorder. These high rates may particularly relate to how the Dutch health care system is organized (i.e., no major financial constraints, no distance barriers, and access to a broad range of services) as previous studies showed that the Dutch help-seeking rates are among the highest as compared to other countries.[11] Similar high lifetime help-seeking probabilities for mood disorders were found in a Dutch study based on a community sample of adolescents rather than an offspring sample.[16] Like our study, participants in this study participated in a longitudinal study including multiple assessments, which may also have contributed to the

high help-seeking estimates we found. Although help-seeking was not actively stimulated by interviewers of these studies, it is conceivable that participation in cohort studies encourages help-seeking. Finally, and very importantly, the offspring in our study constitute a distinctive group with regard to help-seeking as their parents had a history of a depressive and/or anxiety disorder which have shown to be positively related to mental health services use.[40-42] In addition, parental treatment-seeking in particular may be of relevance. A cross-sectional study found the impact of parental depression on child mental health care use to be greatest for parents who received treatment.[43] Whether these factors also impact the time to initial help-seeking is an important issue to address in future studies.

We found that females had a shorter time to help-seeking than males, which is consistent with studies supporting gender differences in help-seeking behavior.[44,45] It is suggested that men's masculinity norms, stereotypes, and ideology can act as barriers to help-seeking.[44,45] In addition, offspring with an earlier age of disorder onset or with an anxiety disorder reported longer help-seeking delays than offspring with a later age of onset or with a mood or comorbid disorder, which is in line with findings from community samples.[e.g.11,16] Previous investigators[12,18] suggested that the longer delays in early-onset cases may be due to children's dependency on their parents or other adults to start the help-seeking process. Youth internalizing symptoms may be overlooked or not be recognized by adults due to their covert nature or considered as normal moodiness, especially in adolescence.[46,47] In addition, young persons with an early-onset may have become accustomed to their symptoms and may not reflect on these symptoms as being 'abnormal'. In the case of persons with an anxiety disorder, it is possible that these are (initially) less disabling compared to mood disorders[22,23], which may be a good reason for not seeking help or wait several years to do so. Note, however, that (developmental early manifestations of) anxiety disorders may set out, or be initially experienced as mild, yet they easily become chronic and highly impairing.[48-51]

Finally, more than one third of the offspring with mood and/or anxiety disorders entered secondary care. The patterns we found in our high-risk sample, that is comorbidity, a lower IQ and a lower SES facilitating secondary care entrance, were roughly similar to those found by Raven and colleagues[16] who studied the time to treatment with secondary care in a community sample of Dutch adolescents using the same administrative health care data. It should be noted that, in this study, not all hazard ratios reached statistical significance, but patterns were clearly in the same direction. We found IQ and SES to be particularly relevant for secondary care entrance (and not for initial help-seeking). In the Netherlands, secondary care usually requires a referral from a general practitioner (GP), who has a central position as gatekeeper to specialist services.[52] It may be that GPs are less likely to refer persons with high IQ and a high SES to secondary care as it is often believed that these individuals have more social and cognitive resources available to cope with their psychological problems without the need for specialist care. As suggested by Raven and colleagues[16] another explanation may be that parents of higher SES more often refer their children to types of care not included in the PCRNN, for example private practices.

Implications

Offspring of depressed and anxious patients have a very high risk of developing a similar disorder themselves that often occurs early in life.[24,53,54] Although it is reassuring that most offspring who developed a disorder did seek help, many waited several years before doing so. Considering the prognosis of mood and anxiety disorders[51,55], the development of strategies to reduce help-seeking delays may be highly relevant to prevent a recurrent or chronic course. Such strategies may also be helpful to prevent a full-blown disorder when encouraging help-seeking when the first signs and symptoms occur, thus in the earliest subclinical stage.

Efforts should therefore be made to raise awareness of the importance of timely help-seeking, to improve symptom recognition and to increase knowledge on help-seeking possibilities among offspring as well as their parents and school personnel, as the latter two have been shown to play an important if not pertinent role in the help-seeking process for child and adolescent psychopathology.[33,56] One way to raise awareness and reduce help-seeking delays may be to actively approach patients (and through them their offspring) via adult mental health services. While parents perceive many barriers to involve their child in prevention or treatment directly, it has been found that parents may be open to psychoeducation on offspring mental health or on parenting.[57] Direct involvement of the offspring themselves is another possibility. In addition, after treatment has ended watchful monitoring through raising awareness in GPs, parents and teachers of the importance of timely help-seeking when symptoms reoccur may aid to prevent relapse.

A worrisome finding is the delay in initial help-seeking among offspring with an early disorder onset, especially in childhood, or a primary anxiety disorder, as both tend to have a severe clinical course. An earlier age of onset is associated with more frequent recurrences, higher psychiatric comorbidity and hospitalization[58-60], and anxiety disorders often become chronic, with enduring symptoms and long-lasting impairments in social and work functioning[50,51], especially if left untreated. Strategies to promote help-seeking should therefore give special attention to these groups, especially since available treatments for anxiety disorders have proven very effective in youth.[61,62]

In the present study, an estimated 36.0% of offspring with a mood and/or anxiety disorder received secondary care. It is hard to say whether this can be considered as a high or low percentage. On the one hand, several clinical guidelines propose a stepped care approach to the treatment of depression and anxiety.[63-65] Within this approach, first onsets, will, when possible, be managed in primary care since treatment will be allocated depending on the severity of symptoms, beginning with the least intensive interventions and only if necessary, moving on to more intensive levels of care. On the other hand, the problems of offspring with mood or anxiety disorders may be rather complex, as such providing a better fit with specialty mental health care. These offspring often face additional family adversities such as financial stress, parental conflict and social isolation[66], and a first episode in this vulnerable group may flag the beginning of lifelong difficulties. Direct referral to secondary care may therefore also be a course of action to consider.

Conclusion

This study showed that the vast majority of offspring of depressed and anxious patients seek help after the first onset of mood and/or anxiety disorder, although delays were common and a third waited for more than two years. Having a childhood-onset or anxiety was associated with the longest help-seeking delays. Systematic efforts to promote timely help-seeking by offspring in general, and particularly in those with a childhood-onset or an anxiety disorder, may prevent a recurrent or chronic course.

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